METHOD AND APPARATUS FOR EXCHANGING ROUTING INFORMATION WITHIN AN AUTONOMOUS SYSTEM IN A PACKET-BASED DATA NETWORK

Abstract of the Disclosure

A method for exchanging routing information between I-BGP routers within an autonomous system (AS) advantageously enables a solution to both persistent route oscillation problems and transient route oscillation problems which may occur when using I-BGP in a given AS. Conventional I-BGP protocol techniques are extended by enabling I-BGP speakers (*e.g.*, routers) to communicate a set of possible best paths to a given destination, rather than communicating only a single best path, to each of their I-BGP peers within the given AS. Specifically, a plurality of possible best paths to a destination are communicated (where there are in fact more than one) from an I-BGP speaker in a given AS to its I-BGP peers (within the given AS), for each neighboring AS that provides any such paths (*i.e.*, routes to the destination).